CLAIM AMENDMENTS

1-70. (canceled)

71. (new): A method to deliver a biologically active agent to a target tissue or organ, which method comprises

administering to a subject containing said tissue or organ an emulsion of fluorocarbon-based nanoparticles,

said nanoparticles being coated with a lipid/surfactant layer, said layer containing said biologically active agent; and

wherein said particles are coupled to a targeting ligand that binds to a moiety on or in said tissue or organ; and

wherein said targeting ligand effects prolonged contact between said tissue or organ with the coated nanoparticles in the emulsion.

72. (new): The method of claim 71, wherein said biologically active agent is a nucleic acid and said surfactant/lipid monolayer comprises at least one cationic lipid.

73. (new): The method of claim 72, wherein said nanoparticles further comprise at least one anionic lipid.

74. (new): The method of claim 71, wherein said prolonged contact is localized to the surface of cells contained in said tissue or organ.

75. (new): The method of claim 71, wherein said targeting ligand is selected from the group consisting of antibodies, antibody fragments, peptides, asialoglycoproteins, polysaccharides, aptamers, nucleic acids, peptidomimetics, mimetics and drugs.

76. (new): The method of claim 75, wherein said targeting ligand is an antibody.

77. (new): The method of claim 71, wherein said fluorocarbon is perfluorooctylbromide.

78. (new): The method of claim 71, wherein said fluorocarbon is a liquid with a boiling point above 30°C.

79. (new): The method of claim 78, wherein said fluorocarbon liquid has a boiling point above 90°C.

80. (new): The method of claim 71, wherein said biologically active agent is selected from the group consisting of chemotherapeutic agents, drugs, genetic materials, nucleic acid-based therapy, protein or peptide therapy, radioactive isotopes or combinations thereof.

81. (new): The method of claim 80, wherein said biologically active agent is a chemotherapeutic agent.

82. (new): The method of claim 71, wherein said lipid/surfactant layer is composed of a material selected from the group consisting of a natural or synthetic phospholipid, a fatty acid, cholesterol, lysolipid, sphingomyelin, tocopherol, glucolipid, stearylamine, cardiolipin, a lipid with ether or ester linked fatty acids and a polymerized lipid.

83. (new): The method of claim 71, wherein said surfactant is at least one nonionic and/or amphoteric surfactant.

84. (new): The method of claim 71, wherein said emulsion contains an emulsifying and/or solubilizing agent.

85. (new): The method of claim 71, wherein said emulsion particles have a diameter in the range of 0.01 to 10 microns.

86. (new): The method of claim 85, wherein said emulsion particles have a diameter in the range of approximately 0.1 to 0.5 microns.